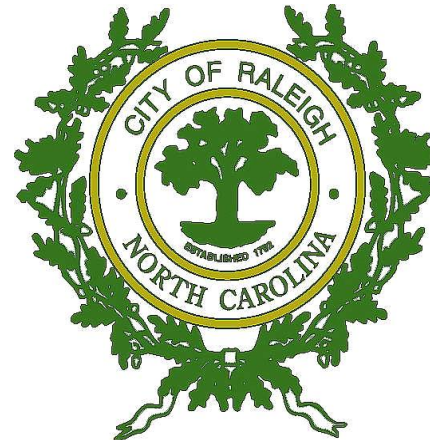


SIERRA DRIVE STORMWATER IMPROVEMENT PROJECT

Preliminary Design



City of Raleigh
Stormwater Utility
222 West Hargett Street
Raleigh, NC 276032



PROJECT BACKGROUND

Project Objective:

- Address reported house and road flooding and repair eroded areas

Project Phases:

1. Planning Study

- Evaluate the existing storm drainage system
- Investigate improvement alternatives
- Select the optimal alternative for final design

2. Final Design

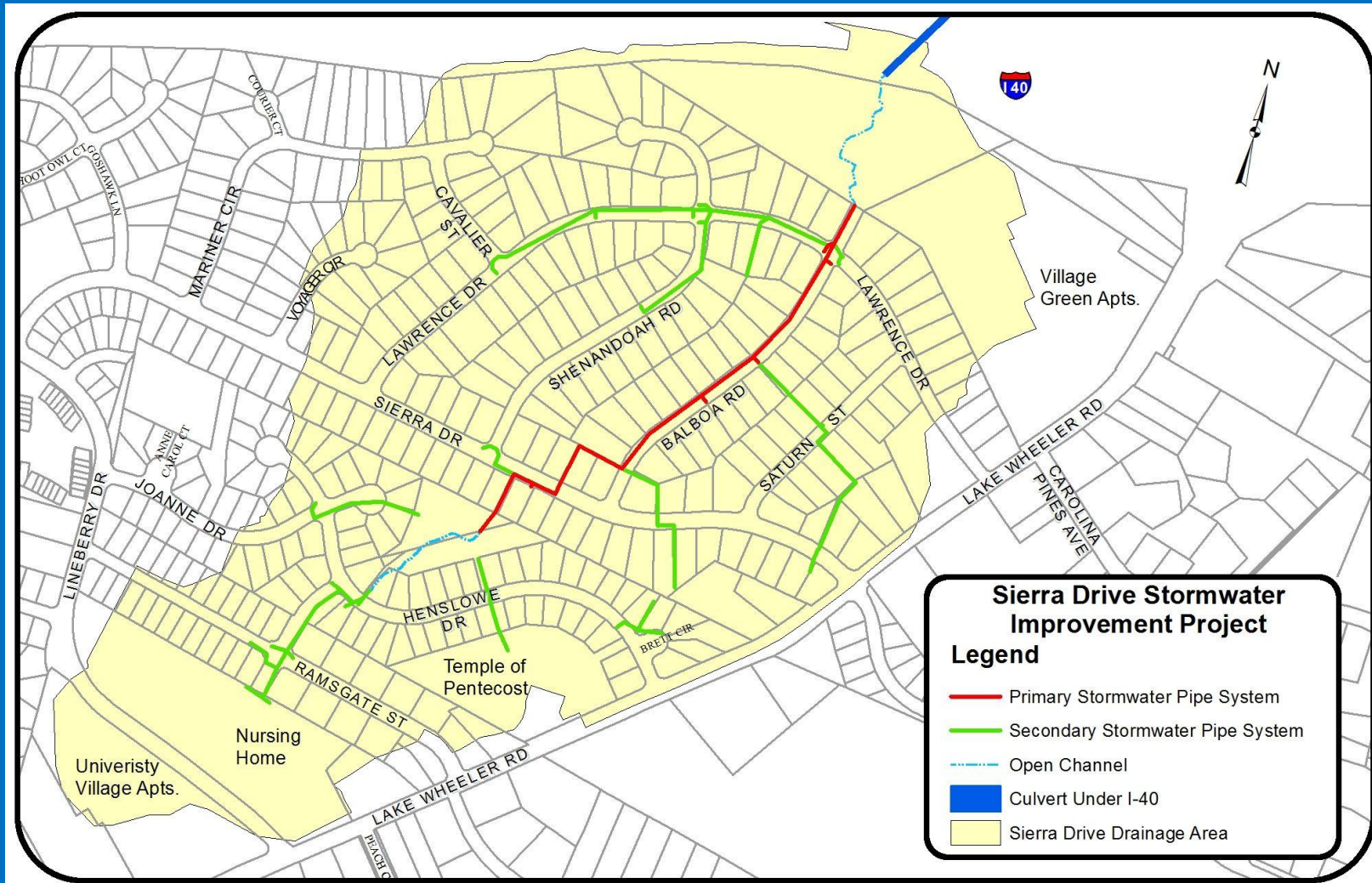
- Geotechnical Investigation
- Utility relocations and coordination
- Easements Acquisitions
- Permitting

3. Construction

Approximate Project Timeline:

- | | |
|-------------------------|-------------|
| ➤ Planning Study Phase: | Completed |
| ➤ Final Design Phase: | 2014 - 2015 |
| ➤ Construction Phase: | 2016 |

PROJECT AREA MAP



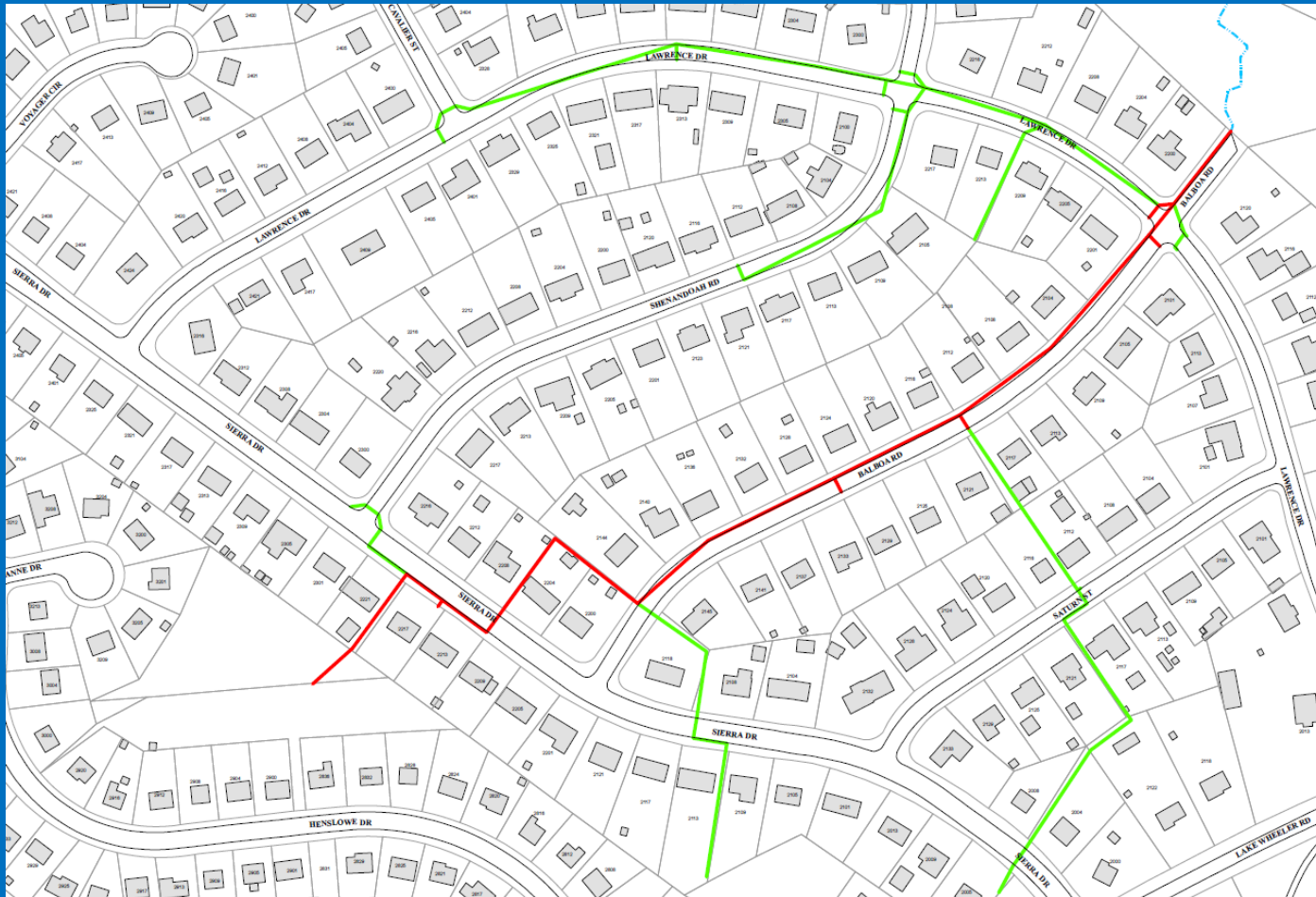
FLOODING LOCATIONS



FLOODING PHOTOS



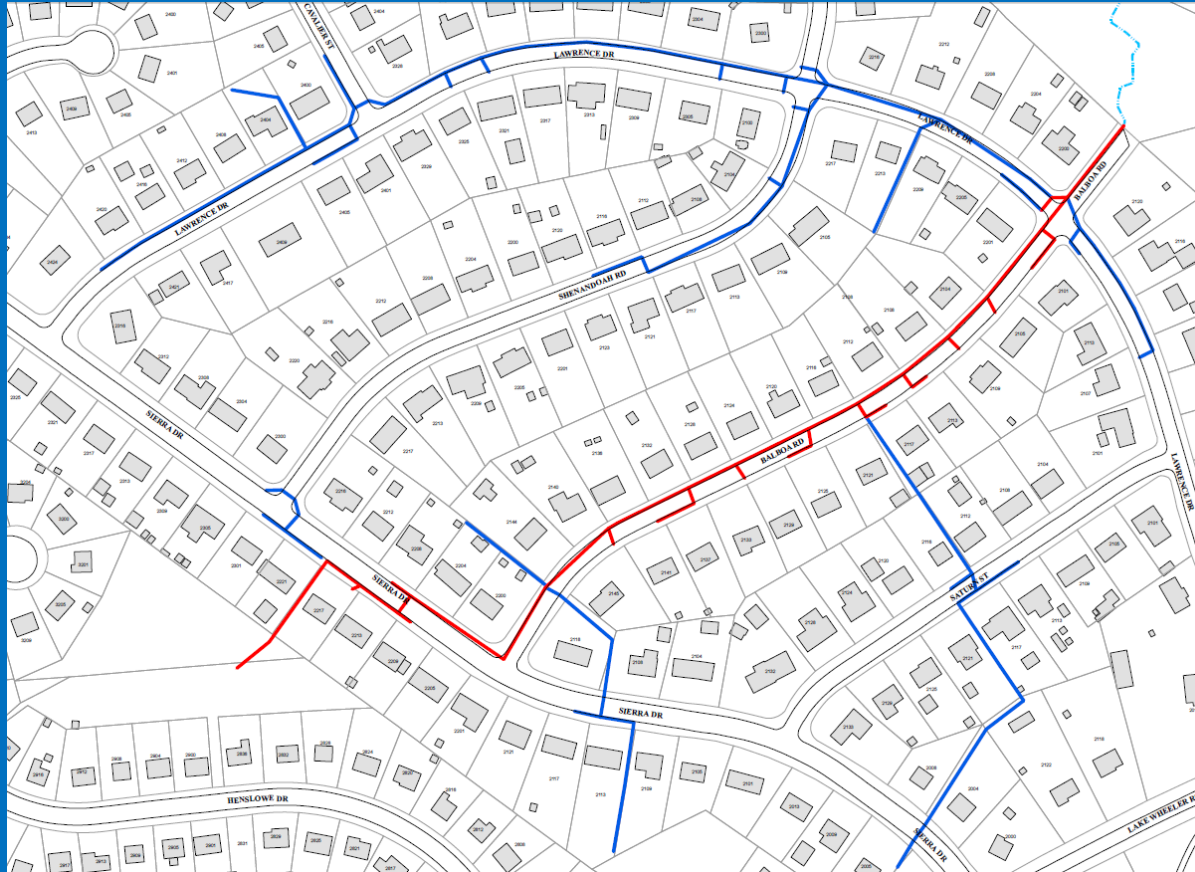
ALTERNATIVE SELECTION EVALUATION



Evaluated four improvement alternatives to alleviate flooding:

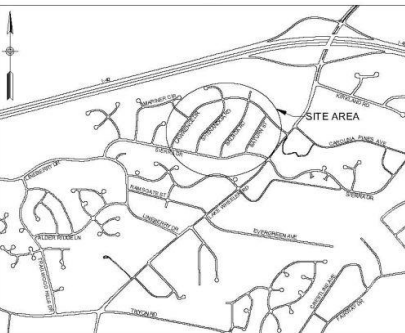

1. Replace existing pipes with larger pipes in current alignment
2. Install a parallel pipe system along Balboa Road to utilize existing pipes
3. Install pipes in a new alignment at Balboa/Sierra intersection and Sierra Dr.
4. Install pipes in the new alignment at Balboa/Sierra intersection

SELECTED ALTERNATIVE COMPREHENSIVE ANALYSIS



- Performed a more detailed analysis of the selected alternative
- Increased pipe sizes to provide capacity for the 25-year storm event (City Design Standard is 10-year)
- Included additional catch basins along primary and secondary pipe system
- Investigated ways to manage flow through yards during storms above 25-year

PRELIMINARY CONSTRUCTION PLANS

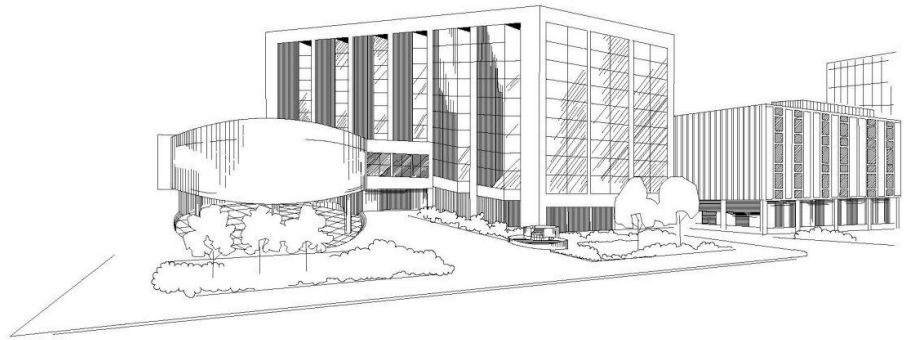

VICINITY MAP NTS	
	
DRAWING INDEX: 1 COVER SHEET 2 SHEET LAYOUT 3-16 PLAN AND PROFILE SHEETS	
Photo Number(s)	0
Number of Lot(s)	0
Lot Number(s) by Phase	0
Number of Units	0
Liveable Buildings	0
Open Space	0
Public Water (LF)	0
Public Sewer (LF)	0
Public Street	0
Public Sidewalk (LF)	0
Plans Drawn/Prepared By:	CAD File Path:
 US INFRASTRUCTURE OF CAROLINA, INC. 1001 S. APPROVED STREET, SUITE 100 DURHAM, NORTH CAROLINA 27604 NC LICENSE # C-1960	H:\LANDPROJECTS\100112 SIERRA DRIVE\PLANS\DWG\100112_ACH_01_DRAWING.dwg May 2013
APPROVED _____ Storm Water Manager	DATE _____

THE CITY OF RALEIGH

PUBLIC WORKS DEPARTMENT

J. RUSSELL ALLEN
CITY MANAGER

NANCY MCFARLANE
MAYOR



Construction Plans of Proposed
SIERRA DRIVE STORM WATER IMPROVEMENTS

All construction to be in strict accordance with the City of Raleigh Standards and Specifications

PRELIMINARY
Do Not Use For Construction
20% COMPLETE

COVER SHEET

1

QUESTIONS AND COMMENTS

For more information, please contact:

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or the Stormwater Utility Division

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Email: StormwaterHelpingU@raleighnc.gov